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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,482	07/22/2003	Minoru Toda	MSI-160	9127

7590 05/26/2005

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EXAMINER

DOUGHERTY, THOMAS M

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/625,482	Applicant(s) TODA, MINORU	
	Examiner Thomas M. Dougherty	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) 9-20, 27-60, 63-65 and 67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 61 is/are rejected.
- 7) ☒ Claim(s) 2-8, 21-26, 62, 66 and 68 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed on March 7, 2005 have been fully considered but they are not persuasive. The restriction stands for the reasons cited in the Election/Restriction requirement.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Topa et al. (US 2002/0089262). Topa et al. show (fig. 2a) an ultrasonic transducer (100) comprising: a holder (12) having at least two spaced apart cylindrical surfaces (14); a cylindrical piezoelectric film (26) spanning between the at least two spaced apart cylindrical surfaces (14) of the holder (12); an outer electrode segment (not numbered but connected to AC voltage source) disposed on an outer surface of the film (26); and an inner electrode segment (not numbered, but also connected to the AC voltage source, shown in hatch).

Recitation of the radiation direction of the acoustic energy generated in response to an excitation voltage is regarded as a goal of the invention. As Topa et al. show the claimed structural features of the invention, they are regarded as inherently reading on this claimed aspect.

Recitation of the holder restricting propagation of the radiating acoustic energy along a propagation path defined within an interior of the film is regarded as a goal of the invention. As Topa et al. show the claimed structural features of the invention, they are regarded as inherently reading on this claimed aspect.

Allowable Subject Matter

Claims 2-8, 21-26, 62, 66 and 68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or fairly suggest a holder with a plurality of cylindrical portions in connection with a piezoelectric film wrapped around it, further including: in re claim 2, a cover spaced from the outer surface of the film, wherein the cover includes a flange which restricts propagation of the radiating acoustic energy along a propagation path defined along an exterior of the film; further including in re claims 3 and 4, a reflector disposed at an end for redirecting the radiating acoustic energy in an opposite direction; further including, in re claim 5, two pairs of spaced apart cylindrical surfaces of the holder; further including, in re claim 21, electrode segments about half of the width of the wavelength of the driving frequency; further including, in re claim 23, a drive circuit for sequential excitation voltage application to electrode segments.

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining prior art, mostly by Toda et al., shows features that include at least some of the features noted above.

Direct inquiry to Examiner Dougherty at (571) 272-2022.


tmd

May 11, 2005


TOM DOUGHERTY
PRIMARY EXAMINER